

AMENDMENTS TO THE CLAIMS:

1. (Original) A light-emitting semiconductor device which is formed by laminating plural layers of group III nitride compound semiconductor, comprising:

an active layer having single layer structure of a semiconductor layer at least including indium (In),

wherein composition ratio a of indium (In) is in a range of 0.0001 to 0.05, said composition ratio a is varied at a constant period L in waveform in a direction of the z axis which is parallel to the growth axis of said active layer, and said period L is arranged to be an approximately constant value selected from a range of 1nm to 10nm.

2. (Original) A light-emitting semiconductor device which is formed by depositing plural layers of group III nitride compound semiconductor, comprising:

an active layer having single layer structure of a semiconductor layer at least including indium (In),

wherein composition ratio a of indium (In) is in a range of 0.0001 to 0.05, said composition ratio a is varied at a constant period L in waveform in a direction of the z axis which is parallel to the growth axis of the active layer, and said period L is arranged to be an approximately constant value selected from a range of one to six times of Bohr radius R .

3. (Currently Amended) A light-emitting semiconductor device according to claim 1 ~~or 2~~, wherein said period L is an approximately constant value selected from a range of 2.4nm to 6.8nm.

4. (Currently Amended) A light-emitting semiconductor device according to claim 1 ~~any one of claims 1-3~~, wherein said composition ratio a is in a range from 0.010 to 0.040.

5. (Currently Amended) A light-emitting semiconductor device according to claim 1 ~~any one of claims 1-4~~, wherein gradient $\delta a / \delta z$ is arranged to be 0.01 nm^{-1} or less at each place.

6. (Currently Amended) A light-emitting semiconductor device which is a surface emitting type of semiconductor laser which is manufactured according to a method in claim 1 ~~any one of claims 1-5~~, comprising:

reflection planes vertical to the z axis, each of which is formed on and below said active layer, respectively,

wherein optical distance ΔZ between two reflection planes are arranged to an integral multiple of half ~~a~~ an oscillation wavelength λ ($\lambda/2$).

7. (Original) A light-emitting semiconductor device according to claim 6, wherein said integer number is in a range of from 1 to 10.

8. (Currently Amended) A method for manufacturing a light-emitting semiconductor device of claim 1 ~~any one of claims 1-6~~, wherein supply amount of indium (In) material gas per unit time to the crystal growth surface on which said active layer grows is varied at a constant period selected from a range of 10 sec. to 6 min.

9. (Currently Amended) A method for manufacturing a light-emitting semiconductor device

of claim 1 ~~any one of claims 1-8~~, wherein said period is in an approximately constant selected from a range of 30 sec. to 2 min.

10. (Currently Amended) A light-emitting semiconductor device according to claim 1 ~~any one of claims 1-7~~, wherein said active layer is doped with donor impurity so that electric concentration may be in a range of $1 \times 10^{16}/\text{cm}^3$ to $1 \times 10^{18}/\text{cm}^3$ at a room temperature.

11. (New) A light-emitting semiconductor device according to claim 2, wherein said period L is an approximately constant value selected from a range of 2.4nm to 6.8nm.

12. (New) A light-emitting semiconductor device according to claim 2, wherein said composition ratio a is in a range from 0.010 to 0.040.

13. (New) A light-emitting semiconductor device according to claim 3, wherein said composition ratio a is in a range from 0.010 to 0.040.

14. (New) A light-emitting semiconductor device according to claim 2, wherein gradient $\delta a / \delta z$ is arranged to be 0.01 nm^{-1} or less at each place.

15. (New) A light-emitting semiconductor device which is a surface emitting type of semiconductor laser which is manufactured according to a method in claim 2, comprising:
reflection planes vertical to the z axis, each of which is formed on and below said active layer, respectively,

wherein optical distance ΔZ between two reflection planes are arranged to an integral multiple of half a an oscillation wavelength λ ($\lambda/2$).

16. (New) A method for manufacturing a light-emitting semiconductor device of claim 2, wherein supply amount of indium (In) material gas per unit time to the crystal growth surface on which said active layer grows is varied at a constant period selected from a range of 10 sec. to 6 min.
17. (New) A method for manufacturing a light-emitting semiconductor device of claim 3, wherein supply amount of indium (In) material gas per unit time to the crystal growth surface on which said active layer grows is varied at a constant period selected from a range of 10 sec. to 6 min.
18. (New) A method for manufacturing a light-emitting semiconductor device of claim 2, wherein said period is in an approximately constant selected from a range of 30 sec. to 2 min.
19. (New) A method for manufacturing a light-emitting semiconductor device of claim 3, wherein said period is in an approximately constant selected from a range of 30 sec. to 2 min.
20. (New) A light-emitting semiconductor device according to claim 2, wherein said active layer is doped with donor impurity so that electric concentration may be in a range of $1 \times 10^{16}/\text{cm}^3$ to $1 \times 10^{18}/\text{cm}^3$ at a room temperature.